SAFETY DATA SHEET

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : SWA256 STANDARD SAMPLE, EACH 100µg/mL in Acetone

NAME OF MANUFACTURER : GL Sciences Inc.

ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan

CHARGE SECTION : International Sales Section

TELEPHONE No. : +81-3-5323-6620 FACSIMILE No. : +81-3-5323-6621 PRODUCT No. : 1021-58004 SDS No. : 1021-58004

Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable Liquids : Category 2

Eye damage/eye irritation : Category 2B Toxic to reproduction : Category 2

Specific target organ toxicity - Single exposure

: Category 3 (respiratory tract irritation,

narcotic effects)

Specific target organ toxicity - Repeated exposure

: Category 2 (Blood system)

HAZARDS SYMBOL







SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour

H320 Causes eye irritation

H361 Suspected of damaging fertility or the unborn child

H335+H336 May cause respiratory irritation; or May cause drowsiness or dizziness
H373 May cause damage to organs through prolonged or repeated exposure.

PRECAUTIONARY STATEMENTS:

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. –No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P264 Wash hands and eyes thoroughly after handling.

P260 Do not breathe fume/gas/mist/vapours.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse

skin with water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P308+p313 IF exposed or concerned: Get medical attention.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P314 Get medical attention if you feel unwell.

P337+P313 If eye irritation persists: Get medical attention.

P370+P378 In case of fire: Use appropriate media such as chemical powder or carbon

dioxide to extinguish.

P403+ P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with all applicable regulations.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	CONTENT	CHEMICAL FORMURA	CAS.No.	TSCA INVENTRY	EINECS No.	EC INDEX No.
Acetone	Approx. >99%	СзН6О	67-64-1	Listed	200-662-2	606-001-00-8
Dodecamethylcyclohexasiloxane	0.01%	C12H36O6Si6	540-97-6	Listed	208-762-8	Not listed
Butylhydroxytoluene	0.01%	C15H24O	128-37-0	Listed	204-881-4	Not listed
Tris(2-chloroethyl) Phosphate	0.01%	C6H12C13O4P	115-96-8	Listed	204-118-5	015-102-00-0
Dibutyl Phthalate	0.01%	C16H22O4	84-74-2	Listed	201-557-4	607-318-00-4
Bis(2-ethylhexyl) Adipate	0.01%	C22H42O4	103-23-1	Listed	203-090-1	Not listed
Bis(2-ethylhexyl) Phthalate	0.01%	C24H38O4	117-81-7	Listed	204-211-0	607-317-00-9

4. FIRST AID MEASURES

GENERAL ADVICE : Consult a physician. Show this safety data sheet to the doctor in attendance.

INHALATION : Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists,

consult a physician.

SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or

shower. Use soap to help assure removal. If irritation persists, consult a

physician.

EYE CONTACT : Flush eyes well with flooding large amounts of running water for at least 15

minutes. Assure adequate flushing by separating the eyelids with sterile fingers.

If possible, remove any contact lenses. Consult a physician immediately.

INGESTION : Rinse mouth, give plenty of water to dilute the substance. Do not induce

vomiting. Never give anything by mouth to an unconscious person. Consult a

physician immediately.

MOST IMPORTANT SYMPTOMS : Irritation eyes, nose, throat; headache, dizziness, central nervous system

depression; dermatitis.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

FIRE & EXPLOSION HAZARDS : Toxic, irritating, dust or smoke may be emitted. Carbon dioxide may be foamed.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS

: Firemen should wear normal protective equipment(full bunker gear) and

positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area. In case of insufficient

ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid

contact with skin and eyes.

ENVIROMENTAL PRECATIONS : Prevent further leakage or spillage if safe to do so. Do not let product enter

drains. Discharge into the environment must be avoided.

METHODS FOR CLEAN UP : Do not touch spilled material without suitable protection. Pick up and arrange

disposal without creating dust. Sweep up and shovel. Keep in suitable, closed

containers for disposal.

7. HANDLING AND STORAGE

HANDLING : Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure.

STORAGE : Store away from sunlight in well-ventilated dry place at room temperature.

Keep container tightly closed.

INCOMOPATIBLE PRODUCTS : Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.

Use only with adequate ventilation.

VENTILATION : Local Exhaust; Necessary, Mechanical(General); Necessary

PERSONAL PROTECTION

RESPRATORY PROTECTION : Use respirators and components tested and approved under appropriate

government standards such as NIOSH (US) or CEN (EU).

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HAND PROTECTION : Chemical resistant gloves
EYE PROTECTION : Safety glasses(goggles)
SKIN PROTECTION : Protective clothing

CONTROL PARAMETERS

 OSHA PEL
 : TWA 1000ppm(2400mg/m³)

 NIOSH REL
 : TWA 250ppm(590mg/m³)

 ACGIH
 : TWA 500ppm STEL 750ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

FLASH POINT : -18 $^{\circ}$ C (-0.4 $^{\circ}$ F) (TCC) FLAMMABILITY : Not available

EXPLOSIVE LIMITS : 2.15% (lower), 13 % (upper)

VAPOR PRESSURE : 24.7 kPa at 20 ℃

VAPOR DENSITY : 2.0

DENCITY : $0.789-0.792 \text{ g/cm}^3 \text{ at } 20 ^{\circ}\text{C}$

SOLUBILITY IN

Water : Miscible
Alcohol, ether : Freely soluble

PARTITION COEFFICIENT; n-octanol/water : log Pow: -0.24

AUTOIGNITION TEMPERATURE : 538 °C (1054.4 °F)

DECOMPOSITION TEMPERATURE

: Not available

10. STABILITY AND REACTIVITY

REACTIVITY : Reaction with strong oxidizers may be emitted explosive peroxides.

CHEMICAL STABILITY : Stable under recommended storage conditions.

CONDITION TO AVOID : Sunlight, heat, open flames, high temperature, sparks, static electrical charge,

other ignition sources, moisture

INCOMPATIBILE MATERIALS : Strong oxidizers, acids

HAZARDOUS DECOMPOSITION PRODUCTS

: Carbon monoxide may be formed.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY -Oral: rat: LD50 = 5800mg/kg(RTECS)

ACUTE TOXICITY -Inhalation: mouse: LC50 =44g/m³/4H(RTECS)

SKIN CORROSION/IRRITATION: rabbit: 395mg/24H, Mild(RTECS)

EYE DAMAGE/EYE IRRITATION: rabbit: 20mg, Severe(RTECS)

GERM CELL MUTAGENICITY : Cytogenetic analysis; hamster; fibroblast; 40g/l (RTECS) CARCINOGENICITY : Not listed as carcinogen on NTP, IARC, OSHA, ACGIH.

REPRODUCTIVE TOXICITY : oral - TDLo rat: 273g/kg(13W male)(RTECS)

inhalation - TCLo mammal: 31500Kg/m³/24H(1-13D preg)(RTECS)

STOST-SINGLE EXPOSURE : Human, irritation of throat 12000ppm(ACGIH,2001)

Human irritation of throat, nose and trachea 1190mg/m³/6h(EHC 207,1998)

Human, irritation of throat 1000ppm/4h(EHC 207,1998)

STOST-REPEATED EXPOSURE : The increase of white blood cell and eosinophilic leukocyte(ACGIH, 2001)

ASPIRATION TOXICITY : Kinematic viscosity(calculated) : 0.426mm²/sec

POTENTIAL HEALTH EFFECTS : Sialorrhea, facial blushing, cough, dizziness, lethargy, headache, throat ache,

unconscious, sicchasia, vomiting

ADDITIONAL INFORMATION

NTP : Not listed

IARC : carcinogenicity: group 4

OSHA : Not listed ACGIH : Not listed

OTHER INFORMATION : RTECS No. AL3150000

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12. ECOLOGICAL INFORMATION

ECOTOXICITY : LC50 - Salmo gairdneri: 5540 mg/L/96hr (at 12°C)

BIODEGRADABILITY: This material is biodegradable.

BIOACCUMULATION POTENTIAL : Not available MOBILITY IN SOIL : Not available OTHER ADVERSE EFFECTS : WGK; 1

Not listed in Montreal Protocol list.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

IATA

UN NUMBER : 1090 UN PROPER SHIPPING NAME : Acetone

CLASS or DIVISION : 3, Flammable liquid

PACKING GROUP : II

ADR/RID : 1090, ACETONE
DOT : 1090, ACETONE
MARINE POLLUTANT : Not classified

15. REGULATORY INFORMATION

US REGULATIONS:

EPA : EPCRA TPQ = Not listed

CERCLA RQ = 5000 lb

OSHA : TQ = Not listed

EU REGURATIONS : Labeling according to EC Directives; See section 2

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.